

Notic of Allowability

Application N .

09/810,928

Examin r

Sarah Song

Applicant(s)

KIKUCHI ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 27 February 2004.
2. ☒ The allowed claim(s) is/are 1 and 81-94.
3. ☒ The drawings filed on 15 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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AKM ENAYET ULLAH
PRIMARY EXAMINER

AKM ENAYET ULLAH
PRIMARY EXAMINER

DETAILED ACTION

1. Applicant's communication filed on February 27, 2004 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Claim 1 has been amended. Claims 2-80 have been canceled. New claims 81-94 have been added. Claims 1 and 81-94 are pending.

Allowable Subject Matter

2. Claims 1 and 81-94 are allowed.
3. The following is an examiner's statement of reasons for allowance: the prior art of record does not disclose or reasonably suggest, either alone or in combination, the arrayed in-line optical device comprising the optical chip inclined against the optical axis and the first and second chip surfaces at an angle in the range of about 0.1 to 5 degrees from perpendicular to the optical axis of the optical powers that pass through the optical chip, wherein lens axes of the first and second plurality of integrated microlenses are tilted to the optical axis that passes through the first and second plurality of integrated microlenses at an angle in the range of about 0.1 to 5 degrees, in combination with the first and second optical collimator array including a first and second optical fiber array block respectively, and first and second microlens array substrate respectively, as claimed in claim 1.
4. Kadar-Kallen et al. discloses an angle of 9 degrees for the microlens array, which is typical for reducing back reflections, but does not disclose or reasonably suggest an angle in the range of 0.1 to 5 degrees and also does not disclose or suggest an optical chip inclined against the optical axis as claimed.

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5. The prior art or record also does not disclose or reasonably suggest, either alone or in combination, the arrayed in-line device comprising the microlens surfaces coupled to the back surfaces, wherein angles of the back surfaces and the microlens surfaces are less than 5 degrees from perpendicular to the optical axis of the optical powers that pass through the microlens array substrates, the substrate surfaces coupled to the chip surfaces, in combination with the first and second optical collimator array including a first and second optical fiber array block respectively, and first and second microlens array substrate respectively, as claimed in claims 85 and 89.

6. Kadar-Kallen et al. discloses the microlens surfaces to be about 9 degrees from perpendicular to the optical axis of the optical powers that pass through the microlens array substrates. Additionally, the microlens surfaces are not coupled to the back surfaces of the spacers 35, 45, but coupled to intermediate surfaces that are not opposite the first surface of the spacers.

7. Therefore, claims 1 and 81-94 are allowable over the prior art of record.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Any inquiry concerning the merits of this communication should be directed to Examiner Sarah Song at telephone number 571-272-2359. Any inquiry of a general or clerical nature, or relating to the status of this application or proceeding should be directed to the receptionist at

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telephone number 571-272-1562 or to the technical support staff supervisor at telephone number 571-272-1615.

Sarah V. Long
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Akmal
AKM ENAYET ULLAH
PRIMARY EXAMINER